

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**



R. PARRISH FREEMAN, JR.  
PETER F. MALEN, JR.  
L. REX SEARS, PH.D.  
ERIC M. KAMERATH  
ROBERT E. AYCOCK  
JENS C. JENKINS  
KEVIN W. STINGER  
WILLIAM J. ATHAY  
MICHAEL B. DODD  
WILLIAM R. RICHTER  
RYAN D. BENSON  
SARA D. JONES  
TIGE KELLER  
JANNA L. JENSEN  
MATTHEW D. TODD  
J. LAVAR OLDHAM  
MICHAEL J. FRODSHAM  
JOSEPH L. KRUPA  
BRETT A. HANSEN  
BRETT I. JOHNSON  
MATTHEW A. BARLOW  
WESLEY C. ROSANDER  
ANDREW S. HANSEN  
CHAD E. NYDEGGER  
JOSEPH G. PIA  
CLINTON E. DUKE

# WORKMAN | NYDEGGER

INTELLECTUAL PROPERTY ATTORNEYS



1000 EAGLE GATE TOWER  
60 EAST SOUTH TEMPLE  
SALT LAKE CITY, UTAH 84111  
TELEPHONE: (801) 533-9800  
FAX: (801) 328-1707  
WEBSITE: [HTTP://WWW.WNLAW.COM](http://www.wnlaw.com)

# PATENT APPLICATION

Docket No. 14321.57

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Masato Mizukami et al.

Serial No.: 10/648,822

Filing Date: August 26, 2003

Confirmation No.: 4584

For: OPTICAL CONNECTOR PLUG, OPTICAL  
CONNECTOR PLUG CONNECTING METHOD,  
OPTICAL FIBER CROSS-CONNECTION  
APPARATUS, OPTICAL FIBER CORD RETRACTING  
METHOD, OPTICAL FIBER CORD RETRACTION  
DEVICE, AND OPTICAL CONNECTOR PLUG  
ALIGNMENT BLOCK

## TRANSMITTAL FOR INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Transmitted herewith for filing and pursuant to 37 C.F.R. § 1.97 is an Information Disclosure Statement, which includes the following statements, if any, required variously by 37 C.F.R. § 1.98:

- |          |   |
|----------|---|
| <u>X</u> | Statement of relevance of selected cited references not in the English language which are not translated.               |
| —        | Statement that selected cited references are substantially cumulative of an enclosed or previously submitted reference. |

\_\_\_\_ Statement that selected cited references were previously cited by or submitted to the United States Patent and Trademark Office in a prior application which is relied upon for an earlier filing date under 35 U.S.C. § 120.

A. Additional Materials Required Due to Content of Information Disclosure Statement

Transmitted are the following documents in addition to the Information Disclosure Statement as required variously under 37 C.F.R. § 1.98:

X Form PTO-1449 listing 3 references submitted for consideration.

X A copy of each of the references listed on the Form PTO-1449.

\_\_\_\_ English translations of \_\_\_\_ (\_\_\_\_) of the references listed on the Form PTO-1449 which are not in the English language.

\_\_\_\_ Copies of the following documents from the prosecution of a previous, related application:

\_\_\_\_ Form PTO-1449 AND INFORMATION DISCLOSURE STATEMENT;  
and

\_\_\_\_ Form PTO-892

B. Additional Materials Required Due to Timing of Filing of Information Disclosure Statement

The transmitted Information Disclosure Statement is being filed within one (1) of the following four (4) time periods:

I. X Prior to the later of either three (3) months following the filing date or the mailing of a first Office Action. Accordingly, no materials other than those listed above are enclosed.

II. \_\_\_\_ Following the latter of either three (3) months following the filing date or the mailing of a first Office Action, but before the mailing of a final Office Action or a Notice of Allowance. Accordingly, to secure consideration thereof, one (1) of the following is also enclosed:

\_\_\_\_ Promptness Certification; or

\_\_\_\_ Check No. \_\_\_\_\_ in the amount of \$180.00 constituting the submission fee set forth in 37 C.F.R. § 1.17(p).

III. \_\_\_\_\_ After the mailing of a Notice of Allowance, but before payment of the Issue Fee. Accordingly, in order to secure consideration thereof, each of the following are also enclosed:

\_\_\_\_\_ Promptness Certificate;

\_\_\_\_\_ Petition for Consideration; and

\_\_\_\_\_ Check No. in the amount of \$ \_\_\_\_\_ constituting the petition fee set forth in 37 C.F.R. § 1.17(i)(1).

IV. \_\_\_\_\_ After payment of the Issue Fee. Accordingly, in order to secure consideration thereof, each of the following are also enclosed:

\_\_\_\_\_ Petition to Withdraw from Issue; and

\_\_\_\_\_ Check No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ constituting the petition fee set forth in 37 C.F.R. § 1.17(i)(1).

C. Fees

The Commissioner is hereby authorized to charge payment of or any deficiency in the following fees associated with this communication, or to credit any overpayment thereof, to Deposit Account No. 23-3178. A duplicate copy of this letter is enclosed.

X Any fee required in relation to filing of this letter or any documents transmitted therewith.

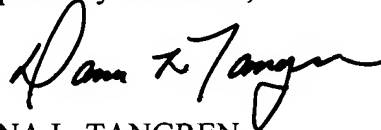
\_\_\_\_\_ The submission fee set forth in 37 C.F.R. § 1.17(p) in the event that 37 C.F.R. § 1.97(c) applies and the Examiner is not satisfied that any Promptness Certificate submitted meets the requirements of 37 C.F.R. § 1.97(e).

\_\_\_\_\_ The submission fee set forth in 37 C.F.R. § 1.17(p).

\_\_\_\_\_ The petition fee set forth in 37 C.F.R. § 1.17(i)(1).

Dated this 4<sup>th</sup> day of February 2004.

Respectfully submitted,



DANA L. TANGREN  
Attorney for Applicant  
Registration No. 37,246  
Customer No. 022913



PATENT APPLICATION  
Docket No: 14321.57

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of )  
)  
Masato Mizukami et al. )  
)  
Serial No.: 10/648,822 ) Art Unit  
) 2874  
Filing Date: August 26, 2003 )  
)  
Confirmation No.: 4584 )  
)  
For: OPTICAL CONNECTOR PLUG, OPTICAL CONNECTOR )  
PLUG CONNECTING METHOD, OPTICAL FIBER )  
CROSS-CONNECTION APPARATUS, OPTICAL FIBER )  
CORD RETRACTING METHOD, OPTICAL FIBER CORD )  
RETRACTION DEVICE, AND OPTICAL CONNECTOR )  
PLUG ALIGNMENT BLOCK )

INFORMATION DISCLOSURE STATEMENT  
UNDER 37 C.F.R. § 1.97

Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Please find, pursuant to 37 C.F.R. § 1.98(a)(1), the enclosed Form PTO-1449 which contains a list of all patents, publications, or other items that have come to the attention of one or more of the individuals designated in 37 C.F.R. § 1.56(c). While no representation is made that these references may be "prior art" within the meaning of that term under 35 U.S.C. §§ 102 or 103, the enclosed listed references are disclosed so as to fully comply with the duty of disclosure set forth in 37 C.F.R. § 1.56.

Moreover, while no representation is made that a specific search of office files or patent office records has been conducted or that no better art exists, the undersigned attorney of record believes that the enclosed art is the closest to the claimed invention (taken in its entirety) of which the undersigned is presently aware, and no art which is closer to the claimed invention (taken in its entirety) has been knowingly withheld.

In accordance with 37 C.F.R. §§ 1.97 and 1.98, a copy of each of the listed references or relevant portion thereof is also enclosed.

Statement of Relevance of References Listed  
Unaccompanied by English Translation  
Under 37 CFR § 1.98(a)(3)

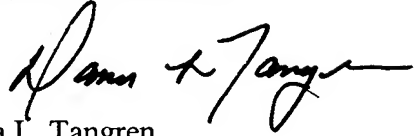
In accordance with 37 CFR § 1.98(a)(3), the following concise explanation of the relevance of each listed reference that is not in the English language and unaccompanied by a translation into English is provided.

Japanese Publication No. 07318820 A: CONSTITUTION: This connection switching device has connecting board 21 which is connected with plugs of optical fibers 35 on an output side and is provided with plural adapters connected with optical fibers 34 of an input side, an aligning board 22 which is arrayed with plural aligning holes for aligning and holding the plugs of the optical fibers 35 on the output side and is arranged to face the connecting board, a hand mechanism 31 which draws out the optical fibers by gripping the plugs and connects and removes these plugs to and from the adapters, a taking-up mechanism which takes up the optical fibers removed of the plugs from the adapters, a surplus length treating section 49 which houses the taken up optical fibers and a moving mechanism which moves the hand mechanism toward the desired position of the connecting board and the aligning board. The device described board and the aligning board. The device described above connects and removes the adapter connected with the optical fibers 34 on the input side and the plugs of the optical fibers 35 on the output side. The connecting board 21, the aligning board 22, the take-up mechanism and the surplus length treating section 49 are arranged on the same plane.

Japanese Publication No. 2002116392 A: PROBLEM TO BE SOLVED: To provide a method and device for changing optical fiber connection without requiring a winding mechanism and an extra length processing part. SOLUTION: A connecting board 33 is provided with a plurality of optical connector adaptors 26 to which an optical fiber cord 25 is connected, while an arraying board 34 is provided with these optical connector plugs 28 of an optical fiber cord 27 which are arranged at state that is opposed to the connecting board 33. A hand mechanism 35 is designed to hold optical connector plugs 29, to draw optical fiber cords 31, and to connect to and disconnect from the optical connector adaptors 26. A fiber holding bar 36 is installed on the optical fiber cords 31, while fiber arraying grooves 30 are lined up in the nearer side of the arraying board 34 in a fashion that the optical fiber cords 31 are easily picked up. A transfer mechanism 37 is constituted so that the hand mechanism 35 is moved to apposition desirable for the connecting board 33 and the arraying board 34.

Dated this 4<sup>th</sup> day of February 2004.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Dana L. Tangren', with a long horizontal flourish extending to the right.

Dana L. Tangren  
Attorney for Applicant  
Registration No. 37,246

WORKMAN, NYDEGGER  
1000 Eagle Gate Tower  
60 East South Temple  
Salt Lake City, Utah 84111  
Telephone: (801) 533-9800



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of )  
 )  
Masato Mizukami et al. )  
 )  
Serial No.: 10/648,822 ) Art Unit  
 ) 2874  
Filing Date: August 26, 2003 )  
 )  
Confirmation No.: 4584 )  
 )  
For: OPTICAL CONNECTOR PLUG, OPTICAL CONNECTOR )  
 )  
PLUG CONNECTING METHOD, OPTICAL FIBER )  
 )  
CROSS-CONNECTION APPARATUS, OPTICAL FIBER )  
 )  
~~CORD RETRACTING METHOD, OPTICAL FIBER CORD~~ )  
 )  
RETRACTION DEVICE, AND OPTICAL CONNECTOR )  
 )  
PLUG ALIGNMENT BLOCK )

CERTIFICATE OF DEPOSIT UNDER 37 C.F.R. § 1.8

I hereby certify that the following documents are being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450, on the 4<sup>th</sup> day of February 2004.

- Transmittal for Information Disclosure Statement (3 pages)
- Information Disclosure Statement (3 pages)
- Form PTO-1449 listing 3 references (2 pages)
- A copy of each of the references list on the Form PTO-1449
- Postcard

Respectfully submitted,

DANA L. TANGREN  
Attorney for Applicant  
Registration No. 37,246

WORKMAN NYDEGGER  
1000 Eagle Gate Tower  
60 East South Temple  
Salt Lake City, Utah 84111  
Telephone: (801) 533-9800  
Facsimile: (801) 328-1707



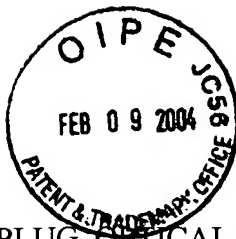
Form PTO-1449

Applicant: Masato Mizukami et al.

Serial No.: 10/648,822

Filing Date: August 26, 2003

For: OPTICAL CONNECTOR PLUG, OPTICAL CONNECTOR PLUG CONNECTING METHOD,  
OPTICAL FIBER CROSS-CONNECTION APPARATUS, OPTICAL FIBER CORD  
RETRACTING METHOD, OPTICAL FIBER CORD RETRACTION DEVICE, AND  
OPTICAL CONNECTOR PLUG ALIGNMENT BLOCK



Sheet 1 of 2

Confirmation No.: 4584

Att'y Docket No.: 14321.57

Group: 2874

INFORMATION DISCLOSURE CITATIONS MADE BY APPLICANT

U.S. Patent Documents

<u>Examiner Initial*</u>	<u>Document Number</u>	<u>Issue Date</u>	<u>Name</u>
------------------------------	----------------------------	-----------------------	-------------

Foreign Patent Documents

<u>Examiner Initial*</u>	<u>Document Number</u>	<u>Publication Date</u>	<u>Country or Patent Office</u>	<u>Translation</u>
_____ 1	07318820 A	12/08/1995	Japan	No
_____ 2	2002116392 A	04/19/2002	Japan	No

Other Documents

(including author, title, pertinent pages, etc.)

Examiner  
Initial\*

\_\_\_\_\_ 3 Kunihiro Sasakura, et al., *Automated Optical Fiber Cabling System for Intelligent Buildings*,  
International Wire & Cable Symposium Proceedings 1999, pp. 364-369.

Examiner:

Date Considered:

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

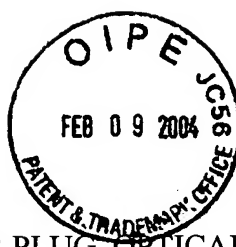
Form PTO-1449

Applicant: Masato Mizukami et al.

Serial No.: 10/648,822

Filing Date: August 26, 2003

For: OPTICAL CONNECTOR PLUG, OPTICAL CONNECTOR PLUG CONNECTING METHOD,  
OPTICAL FIBER CROSS-CONNECTION APPARATUS, OPTICAL FIBER CORD  
RETRACTING METHOD, OPTICAL FIBER CORD RETRACTION DEVICE, AND  
OPTICAL CONNECTOR PLUG ALIGNMENT BLOCK



Sheet 2 of 2

Confirmation No.: 4584

Att'y Docket No.: 14321.57

Group: 2874

### References Cited by Applicants

While the filing of Information Disclosure Statements is voluntary, the procedure is governed by the guidelines of Section 609 of the Manual of Patent Examining Procedure and 37 C.F.R. §§ 1.97 and 1.98. To be considered a proper Information Disclosure Statement, Form PTO-1449 shall be accompanied by a copy of each listed patent or publication or other item of information and a translation of the pertinent portions of foreign documents (if an existing translation is readily available to the applicant), an explanation of relevance of each reference not in the English language, and should be submitted in a timely manner as set out in MPEP Sec. 609.

Examiners will consider all citations submitted in conformance with 37 C.F.R. § 1.98 and MPEP Sec. 609 and place their initials adjacent the citations in the spaces provided on this form. Examiners will also initial citations not in conformance with the guidelines which may have been considered. A reference may be considered by the Examiner for any reason whether or not the citation is in full conformance with the guidelines. A line will be drawn through a citation if it is not in conformance with the guidelines AND has not been considered. A copy of the submitted form, as reviewed by the Examiner, will be returned to the applicant with the next communication. The original of the form will be entered into the application file.

Each citation initialed by the Examiner will be printed on the issued patent in the same manner as references cited by the Examiner on Form PTO-892.

The reference designations "A1," "A2," etc. (referring to Applicant's reference 1, Applicant's reference 2, etc.) will be used by the Examiner in the same manner as Examiner's reference designations "A," "B," "C," etc. on Office Action Form PTO-1142.

W:\14321\57DFW0000009280V001.doc

Examiner:

Date Considered:

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.